

### **REMARKS/ARGUMENTS**

Pending claim 1 recites in part that a local oscillator (LO) frequency is determined that is outside of a signal band of a signal channel. The cited art including U.S. Patent No. 5,507,025 (Rodeffer) fails to teach or suggest this subject matter. Here, it appears that the Office Action relies on a portion of the Background in column 1 (lines 58-63) for such teaching. Office Action, page 3. However, as seen all that this portion of the Background of Rodeffer teaches is that a carrier-to-noise ratio (C/N) is a figure of merit for a satellite receiver. Nothing however teaches or suggests that an LO frequency be outside of a signal band of a signal channel.

Still further, the operation of the system in Rodeffer is contrary to this subject matter of claim 1. Instead in Rodeffer, an LO frequency is controlled to be within a signal band of a signal channel. This is seen in the various examples described in Rodeffer with regard to its first, second and third local oscillators. For example, with regard to the first oscillator, it is taught that this frequency be made variable between  $\pm 0.5$  of the channel bandwidth. As such, this variable LO frequency is *within* the signal band itself, contrary to the recited subject matter. Still further, this is also contrary to the subject matter of claim 1 that recites that the LO frequency be away from a center of a widest signal channel by greater than half of a signal band of the widest signal channel. Instead, Rodeffer teaches that its LO frequency range be no larger than half of a channel bandwidth. E.g., Rodeffer, column 8, line 66 – column 9, line 16; see also column 9, lines 48-50.

As to the subject matter in column 11 identified in the Office Action, Rodeffer simply teaches that the reference frequency for a third oscillator is determined by the reference frequency for the second oscillator. Rodeffer, column 11, lines 48-55. However, as discussed above this reference frequency for the second LO is both within a signal band of a signal channel and has a range not greater than half of a signal band of a widest signal channel.

Still further with regard to claim 1, Rodeffer also fails to teach that this LO frequency be away from the center of the widest signal channel by more than half of the signal band of the widest channel and less than half of a passband width of a baseband filter. Here, nothing in Rodeffer anywhere identifies that if LO frequency be in such a range. Instead, as discussed above the range in which an LO frequency is selected in Rodeffer is from “from zero to one-half the channel width...”, Rodeffer, column 8, line 67. Accordingly, claim 1 and the claims depending therefrom are patentable over the cited art.

As to independent claim 26, it is patentable for at least similar reasons as Rodeffer fails to teach that a LO frequency be determined that is outside of a signal band of a signal channel corresponding to a channel selected by a user. As such, claim 26 and the claims depending therefrom are patentable over the cited art. This is so, as the secondary reference deSantis fails to teach or suggest anything in this regard. Instead, deSantis is simply directed to a switching router to provide connectivity in a satellite system.

New independent claim 44 is patentable for at least similar reasons in that the cited art fails to teach or suggest that a satellite signal spectrum is mixed with a LO frequency that is selected to be outside of a signal band of a signal channel corresponding to a user-selected channel.

In view of these remarks, the application is now in condition for allowance and the Examiner's prompt action in accordance therewith is respectfully requested. The Commissioner is authorized to charge any additional fees or credit any overpayment to Deposit Account No. 20-1504.

Respectfully submitted,

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